Financial markets and monetary policy

Boonstra, W.W.; Eijffinger, S.C.W.

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Financial markets and monetary policy: the Anglo-Saxon perspective versus the continental-European perspective

By Wim W. Boonstra and Sylvester C.W. Eijffinger

1. Financial markets: deregulation and liberalisation

Since the second half of the 1970s, financial markets in most industrial countries have undergone a process of innovation and, thereby, of disintermediation. Financial innovation refers to the introduction of both new financial instruments and techniques and can be divided into product and process innovations.

The introduction of new financial instruments is one outcome of financial product innovation, but it can also mean new characteristics being added to existing instruments.[1] Financial process innovations support the introduction of product innovations or increase the marketability of present instruments. Examples of such process innovations are the strong growth of the so-called off-balance-sheet activities of the banks, the development of financial disintermediation, limiting the role of the banking system, and the rise of securitization making direct loans more negotiable and, thus, more liquid. These financial innovations are created by participants on financial markets in order to enlarge, on the one hand, their profit opportunities and, on the other hand, to reduce and shift the financial risks [Cross (1986)]. The causes of financial innovation can especially be found in the regulation and later deregulation of financial markets, the increased volatility in the development of foreign exchange rates and interest rates, the decreased liquidity and solvency of banks, in particular U.S. based banks and other financial institutions and, finally, the huge budget deficits of governments in certain industrial countries. It should be emphasised that financial innovations and their consequences, like instability of the money demand function, affected Anglo-Saxon countries such as the United States and the United Kingdom in a relatively strong way, compared to the extent in which continental-European countries (Germany, France, Italy, Spain and the Benelux countries) were affected.

Alongside the process of innovation, financial markets in most industrial countries were more and more deregulated and liberalised by the monetary authorities during the second half of the 1970s and the first half of the 1980s. The reasons for financial deregulation and liberalisation are, among others, the collapse of the Bretton-Woods system of fixed exchange rates, the increased budget and current account deficits and higher and more volatile inflation and interest rates. Financial liberalisation refers to the freeing of international capital movements by the lifting of capital controls, whereas financial deregulation applies to the abolishment of rules and restrictions for domestic money and, especially, capital markets[2]. The lifting of international capital barriers

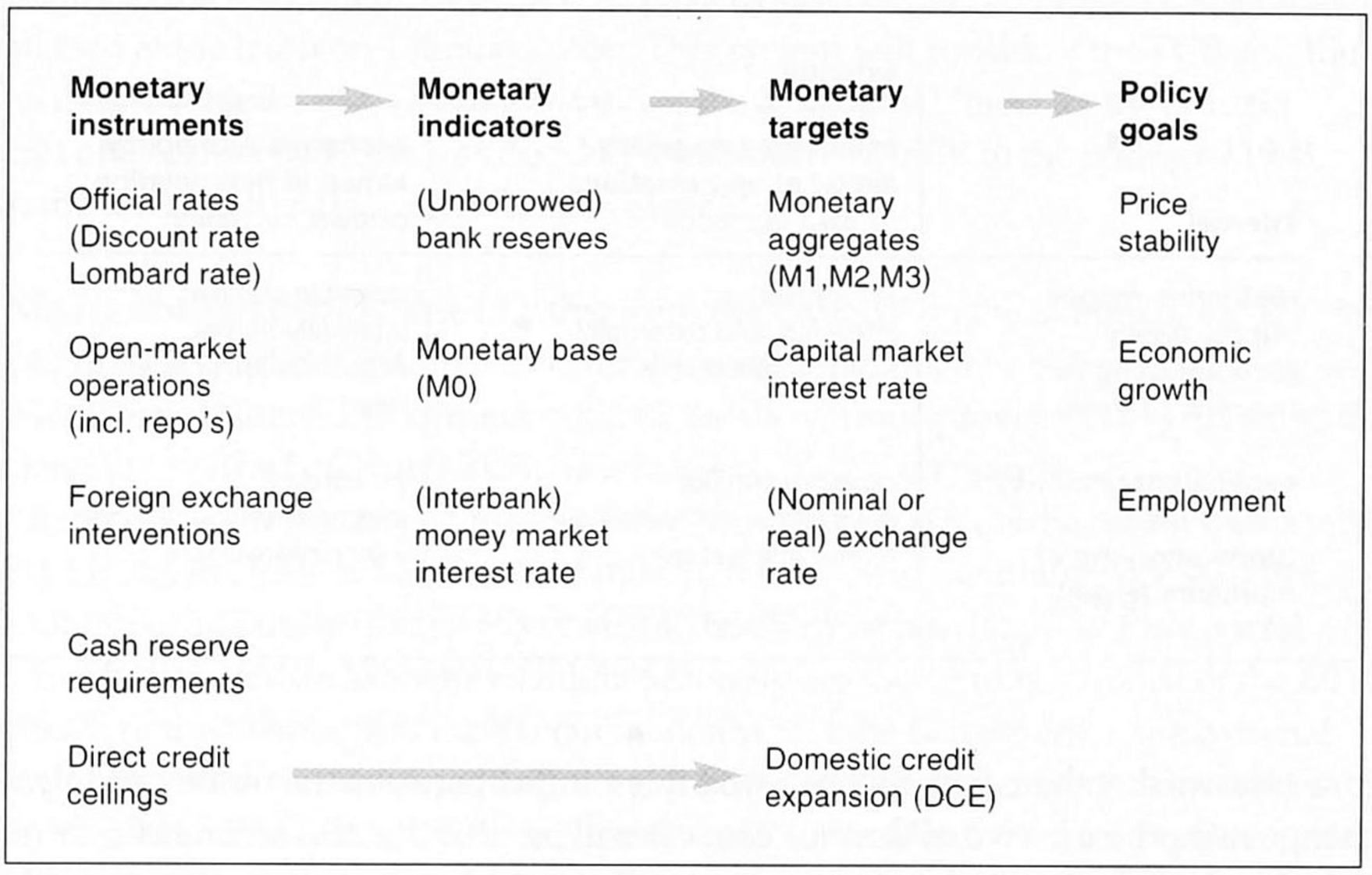
implies, of course, that national money and capital markets gradually integrate into one global money and capital market. Then, short-term and long-term capital can move unimpeded, quickly and at low costs, resulting in increasingly closer links between the domestic money and capital market interest rates of the industrial countries, given the exchange rate risks[3]. Financial integration limits the room of manoeuvre for an autonomous monetary policy, even in the case of a large and relatively closed economy like that of the United States. The deregulation of domestic financial markets not only leads to a blurring of the boundaries between the money and capital markets, but also between the financial institutions themselves. This is one of the main reasons for the tendency towards a universal banking system ('Allfinanz' or 'bancassurance') in countries which previously did not have such a system. Finally, focusing on the consequences for monetary policy-making, new sorts of liquid assets are created, jeopardising the definition of money and further undermining the possibilities of a national monetary policy. If these new assets are not included in the money concept which the central bank tries to control, but can be considered as close substitutes of the liquid assets within the relevant monetary aggregate, then the chosen money concept will unsufficiently reflect the direction and strength of monetary policy. According to Goodhart's Law, every monetary aggregate will eventually lose its meaning if it is used as an intermediate target for monetary policy, because its underlying empirical basis is slipping[4].

2. Monetary policy: transmission process and conflicts

In conducting monetary policy, a central bank tries to achieve certain macro-economic objectives by using its monetary instruments, like the official rates (such as a discount rate and Lombard rate), open-market operations (including repurchase agreements), foreign exchange interventions, cash reserve requirements and direct credit ceilings. These objectives, which are formulated by society and, as a consequence, lie outside the monetary sphere, are called policy goals. Familiar examples are price stability, economic growth and (full) employment. Because monetary policy-makers cannot directly influence these policy goals, they usually choose medium-term monetary targets that they can control in a satisfactory way and the effects of which on the policy goals are sufficiently predictable. Examples of these targets are the narrow and broad monetary aggregates (M1, M2, M3 and even wider aggregates), domestic credit expansion (DCE), capital market interest rate and the (nominal or real) exchange rate vis-à-vis an anchor currency. These targets are, however, also influenced by other, exogenous factors. Therefore, the central banker needs to have one or more intermediate variables between the monetary instruments and the monetary target(s) in order to attain a reliable perspective regarding the effects of the instruments in the short run. These variables are called the monetary indicators, as they reflect the direction and strength of monetary policy, immediately after the use of one or more instruments. Examples of monetary indicators are the (unborrowed) bank reserves, the monetary base (M0), and the (interbank) money market interest rate [Eijffinger (1986)]. The choice of the instruments,

indicator(s) and target(s) depends to a large extent on the view of the monetary authorities (central bank and ministry of finance) regarding the transmission process or mechanism of monetary impulses. Furthermore, the degree of financial innovation, liberalisation and integration and thus the desired market-orientation, flexibility and effectiveness of monetary policy plays a crucial role in this respect (see Figure 1). During the 1980s, in many industrial countries a shift took place from a system of direct credit control aiming directly at a target, in particular domestic credit expansion, towards that of indirect credit control influencing the target indirectly through an indicator.

Figure 1 The transmission process of monetary policy



If the monetary authorities in a certain country use a system of indirect credit control, there may be a conflict between the internal and external monetary policy. Internal monetary policy or money supply policy implies that the central bank tries to influence money growth, however defined, through an indicator, e.g. the interbank money market interest rate. This aim is to reduce (expand) the money supply by an increase (decrease) of the domestic money market interest rate. Besides that, the monetary authorities may be bound to an external monetary policy or exchange rate policy as a consequence of exchange rate agreements on an international level, like the Plaza and Louvre agreements within the G-5 and G-7 respectively, or on a European level, such as the Exchange Rate Mechanism of the European Monetary System. Central banks are then obliged to maintain some nominal exchange rates within an either implicitly or explicitly fixed band. Depending on the different degrees of commitment, they will realise this by (coordinated) foreign exchange market interventions and adjustment of the money market conditions in the relevant countries. An increase (decrease) in the domestic money market interest rate relative to the foreign money market interest rate, will result

in an appreciation (depreciation) of the country's own currency vis-à-vis the foreign currency. This implies that the central bank uses its money market conditions not only for its money supply management, but also for its exchange rate management. Consequentially, there may occasionally be conflicts between the internal and external track of monetary policy in the country concerned. Depending on the desired direction within the framework of the internal and external track, four cases can be distinguished (see Figure 2).

Figure 2 Conflicts between the internal and external monetary policy (in the case of a system of indirect credit control)

	external	
internal	**exchange rate policy aimed at appreciation of own currency**	**exchange rate policy aimed at depreciation of own currency**
restrictive money supply policy (overshooting of monetary target)	*no* conflict: internally and externally higher interest rate	*possible* conflict: internally higher, externally lower interest rate
expansionary money supply policy (undershooting of monetary target)	*possible* conflict: internally lower, externally higher interest rate	*no* conflict: internally and externally lower interest rate

Figure 2 shows that there will only be a possible conflict between the money supply and exchange rate policy in two of the four cases. It will be clear that the occurence of a conflict between the internal and external track not only depends on the extent in which the exchange rate policy of a country is bound to certain preconditions, but also on the degree of market-orientation and flexibility of monetary policy and the openness and size of the country's economy. In practice, there have been considerable differences in this respect among the industrial countries. Especially in the Anglo-Saxon countries, the degree of market-orientation and flexibility of monetary policy has traditionally been much greater than in the continental-European countries and, as a consequence, conflicts are more likely to occur.

3. Economic and Monetary Union in Europe

As from the 1st of January 1999, the Economic and Monetary Union (EMU) will presumably take off for those member states of the European Union which comply with the convergence criteria set by the Maastricht Treaty. From then onwards, the European Central Bank (ECB) will conduct a common monetary policy for the countries

participating in the EMU. Of course, the preconditions for this European monetary policy are laid down in the Maastricht Treaty and the Statutes of the ECB[5]. However, a number of important decisions regarding the strategy and operational framework of future European monetary policy are still to be made by the Council of Ministers of Economics and Finance (Ecofin) and the European Monetary Institute (EMI). Again, we take the transmission process (instruments, indicators, targets and policy goals) of monetary policy as a starting point for our discussion of the main issues[6].

3.1. Goals of monetary policy and the independence of the ECB

According to the Maastricht Treaty, a European System of Central Banks (ESCB) shall be established at the latest on 1 January 1999. This system will consist of the ECB and the national central banks of all member states of the Monetary Union. At the Madrid summit of December 1995, it was decided to establish the ECB in the spring of 1998, when the final go-ahead for EMU will be given.

The Maastricht Treaty provides, together with the Protocol on the Statute of the ESCB and of the ECB, a solid legislative base for the common monetary policy in the Economic and Monetary Union. Furthermore, it stipulates the various provisions to guarantee the independence of the ESCB and ECB. As a matter of fact, their statutes are largely modelled on the law governing the Deutsche Bundesbank [Deutsche Bundesbank (1957), (1989)]. Firstly, the primary objective of the ESCB shall be to maintain price stability. Without impairing this primary objective, the ESCB must also support the general economic policies in the Monetary Union. Secondly, the Governing Council of the ECB, comprised of the members of the Executive Board and the Governors of the national central banks of the countries participating in EMU, will formulate monetary policy within the EMU. The Executive Board consists of the President, the Vice-President and four other members and will implement European monetary policy. Its members will be appointed by the Heads of State and Government, on a recommendation from the Council of Ministers of Economics and Finance, after consulting the European Parliament and the Governing Council of the ECB. Their term of office shall be eight years and their mandate is not renewable. Thirdly, neither the ECB, nor any national central bank shall seek or take instructions from institutions of the Union, from any government or from any other body. Also, each national central bank must be politically independent, ultimately at the date of establishment of the ESCB. This implies, among other things, that the Governor of each national central bank will have a minimum term of office of five years and can only be removed from office if he no longer fulfills the conditions required for his Governorship or in the case of serious misconduct.

In the case of the ECB, the governments of the European Union have apparently chosen for the legislative approach, namely to create by law a very independent central bank with a clear mandate to focus on price stability. This choice was motivated by the success of the Deutsche Bundesbank in maintaining one of the lowest rates of inflation in the world for several decades. Moreover, the academic literature on the time-inconsistency

of monetary policy and on the negative relationship between central bank independence and the degree of inflation in industrial countries provided the theoretical and empirical basis for this legislative approach[7]. Nevertheless, it should be emphasised that legal independence is a necessary but not a sufficient condition for the actual independence of a central bank. Actual independence implies a tradition and culture of monetary stability, not only within the central bank but also within government and parliament. Such a tradition and culture will not be established overnight in the EMU. Naturally, the legal independence of the ECB will be the basis for it earning its credibility and reputation. The mobility of international capital flows and the integration of financial markets in most industrial countries have made the credibility and reputation of the central bank its single most important instrument of monetary policy. This will apply a fortiori to the ECB, which in 1999 by definition will not have any track record.

Furthermore, some remarks could be made on the so-called "sixth convergence criterion": the legal and actual independence of the national central banks in the European Union. According to the Maastricht Treaty, the national central banks should be independent just before entering Stage Three of EMU. This precondition follows logically from the absorption of the national central banks into the ESCB and the participation of the Governors in the Governing Council of the ECB, without seeking or taking instructions from national governments or parliaments. Within the European Union, the Deutsche Bundesbank and the Nederlandsche Bank are generally considered to be the most independent central banks. Apart from France and Spain, there has not been very much progress in this field. The independence of the Banco de España was increased by the central bank law of 1 February 1993, which is modelled after the Statute of the ECB. The law was passed by the Spanish parliament in October 1993 and it made the Banco de España formally as independent as the Bundesbank. In France, on 20 April 1993, the then minister of finance Alphandéry announced a bill to make the Banque de France independent. It also changed its task in defining and putting into effect a monetary policy which aims to assure the stability of prices "within the context of the general economic policy of the government". Also, on 5 January 1994, the French government named the six lay people who would join the Governor and two Vice-Governors of the Banque de France on the central bank's Monetary Policy Committee. Although Mr. Alphandéry said that the independence of the Banque de France was now "at least equal to that of the Bundesbank", one may conclude that its autonomy is not guaranteed in the same sense. Furthermore, the central banks of Finland, Greece, Ireland, Italy, Portugal and Sweden still have to be made legally independent of their national government and parliament[8]. Recently, the Bank of England was given "operational independence" in setting short-term interest rates.

3.2. *Monetary targets*

The monetary policy strategy of the European Central Bank still has to be decided upon. The final decision on the design of monetary policy and the details of the instruments to be used will be made after the establishment of the ECB in Spring 1998. The wide range

of proposals for this strategy currently under discussion can be roughly categorised in: a two-step approach of pursuing the ultimate objective of price stability indirectly, by using an intermediate monetary target, and a one-step approach of achieving the final objective in one move, directly [Issing (1993), EMI (1997)]. The two-step approach has been used in many industrial countries during the second half of the 1970s and 1980s as a consequence of "the long and variable lags" in monetary policy making. By targeting a narrow or broad monetary aggregate (the monetary base, M1, M2 or M3), most countries were quite successful in bringing down expected and actual inflation (shifting-in of the short-term Phillips curve). This era of monetary targeting was the heyday of the Monetarists. The two-step approach is still used with some discretion in continental Europe, in particular in Germany. Given the relatively stable money demand in Germany, the Deutsche Bundesbank has been able to prove that the two-step approach of monetary targeting is an effective strategy in the medium and long run. However, monetary targeting was formally or informally abolished in the other countries. Monetary authorities, especially in the Anglo-Saxon countries (Australia, Canada, New-Zealand, the United Kingdom and the United States), were less successful in monetary targeting. As a result of the high pace of financial innovation and, consequently, instable money demand in these countries, they could no longer identify a suitable intermediate target. Some central banks, e.g. the Federal Reserve System, adopted an eclectic approach of looking at a broad range of information variables, varying from the term and risk structure of interest rates to goods orders, building permits, etc.. Of course, such a strategy of "looking at everything" was not beneficial for the transparency of monetary policy. Other central banks, like the Reserve Bank of New-Zealand, Bank of Canada and the Bank of England, have chosen the one-step approach of inflation targeting because of their problems with monetary targets. It should be emphasised that the actual strategies of these central banks differ a lot in theory and practice. The most extreme method of inflation targeting is the so-called contracting approach that, applying the principle-agent literature, involves the structuring of an optimal contract between the government as the principal and the central bank as the agent. The principal signs a contract with the agent according to which the central bank is subject to an *ex post* penalty schedule depending on realised inflation. The nature of the contract will affect the incentives facing the central bank and will, thereby, affect monetary policy [Walsh (1995)]. Such a system, in which the government imposes an explicit inflation target on the central bank and makes the Governor explicitly accountable for meeting this target, has existed since 1989 in New-Zealand. The Governor of the Reserve Bank can, under certain circumstances, be dismissed if the inflation rate exceeds the two percent level. A more moderate method of inflation targeting has been implemented in Canada with formal target bands for reducing the rate of inflation (CPI). These inflation-reduction targets were announced in early 1991 by both the Bank of Canada and the government, to achieve not only the short-term objectives of preventing a further wage-price spiral and reducing the prevailing inflationary expectations, but also to achieve the longer-term goals of realising price stability and gaining credibility in monetary policy [Freedman (1994)]. The loosest inflation-targeting method is applied in the United Kingdom. At the end of 1992, the British government decided to set an inflation target range of 1 to 4 percent in terms of the increase in the Retail Price Index (RPIX). Since 1993, the Bank of

England has published a quarterly Inflation Report providing an analysis of the various determinants and a prediction of the expected time path of inflation. The inflation-targeting framework is considered by the Bank of England as a possible synthesis of rules and discretion [Crockett (1994)]. It should be stressed that the inflation targets impose no restrictions on the future actions of the monetary authorities, and that there are no costs involved in the announcement of these targets (in the context of game theory: "cheap talk").

3.3. Monetary indicators

Today, central banks in almost all member states of the European Union apply a system of indirect credit control. This means that these central banks influence domestic credit expansion and, as a result, money growth through the (interbank) money market rate. The money market rate in Germany, France and other European countries is steered by the official rates and the open-market operations of the central bank. However, in the United Kingdom the relevant indicator of monetary policy is not the (interbank) money market rate but the base rate of clearing banks, comparable with the prime rate in the United States. That is the rate at which clearing banks will lend in the short run to high-quality borrowers, e.g. large companies. The Bank of England affects the base rates and, thus, the private sector lending rates of banks by manipulating its dealing rates. [Eijffinger (1993)]. With respect to the indicators, the Bank of England is also out of line with the continental European central banks.

The currency crises of September 1992 and July / August 1993 within the EMS Exchange Rate Mechanism proved that the integration of financial markets and the *ex ante* coordination of fiscal and monetary policies between the member states makes high demands on what we would like to call institutional convergence. By institutional convergence is meant the convergence of both financial market structure, interest rate vulnerability of the economy and monetary responsibilities in the EU countries.

The financial market structure is related to, among other things, the maturities, techniques and volumes of national money and capital markets and the organization of financial transactions and operations. If we consider, for example, the financing of government debt in the various member states of the European Union, average public debt maturities appear to differ markedly. At the end of 1990, for example, the weighted average maturity of all government debt, including short-term bonds, in Spain was only 1.5 years, in Denmark and Italy 2.5 years, in Belgium 3.5 years, in Germany 4 years, in the United Kingdom 4 to 5 years, in France 5 to 6 years and in the Netherlands 6.5 years. Especially the Spanish public debt, but also the Danish and Italian public debt appear to be highly sensitive to fluctuations in short-term interest rates[9]. In these countries, particularly in Italy with its huge debt, there is a continous threat of conflict between monetary and budgetary policies. Therefore, in such countries high priority must be given to issuing long-term loans with a fixed interest rate. To do this, it is extremely important to redress inflationary expectations, in order to increase market acceptance for such long bonds.

The interest rate vulnerabilty of the economy largely depends on the financing structure of households and corporates. Looking for example at household mortgage debt financing, the ratio between fixed-rate and floating-rate debt differs considerably among the main EU countries. According to The Economist, at least 90 % of all home-mortgages in Britain at the beginning of the 1990s were at floating interest rates, compared with 10 % or less in Germany and France [Economist (1993), BIS (1995)]. Italy was in the middle with 45 % of all mortgages at variable rates. The extreme position of the United Kingdom reflected its long history of high and volatile inflation, which made long-term mortgage loans at fixed rates unduly risky for lenders. As from 1993, however, there has been a change towards more fixed-rate loans in Britain: 40 % of all new mortgages were at fixed interest rates. This new trend has, among others, been caused by a better access by the British building societies to wholesale finance. The German and French mortgage banks have had access for a long time, through the issue of mortgage bonds.

Regarding the debt financing by companies unfortunately one can not detect any convergence in market structure between the main EU countries. The proportion of company debt at fixed-interest rates as a percentage of total debt is approximately 80 % in Germany, 60 % in France and less than 50 % in the United Kingdom. Because the financial liabilities of the companies in these countries are, generally, larger than their financial assets, a rise in the short-term interest rate implies – in particular in the UK – a lower cash flow.

In such an environment, one hardly can imagine a successful single monetary policy. If, for example, both the United Kingdom and Germany were to participate in the EMU, and the ECB were to push short-term money rates upwards, this would have strongly diverging effects in the various regions within the EMU. The higher short-term rates would soon lead to an increase in mortgage payments in the UK, leading to a decline in free disposable household income, while at the same time having no direct effect on economic activity in Germany.

3.4. Monetary instruments used in European countries

When comparing the experience with monetary instruments in the three largest EU countries – Germany, France and the United Kingdom -, then the special position of the UK is again striking [10]. The monetary instruments of the Bank of England differ considerably from those of the continental central banks as a consequence of the extreme degree of market orientation in UK monetary policy since the beginning of the 1980s. Since 1981, the Bank of England has not even had a formal official tariff, as the base lending rate is a commercial banking tariff. Moreover, neither does it use a cash requirement instrument for monetary policy purposes.

In Germany and France, on the other hand, the cash reserve requirements have played an important role in the conduct of monetary policy, although the actual level of reserve ratios has declined substantially since the middle of the 1980s. With this instrument the

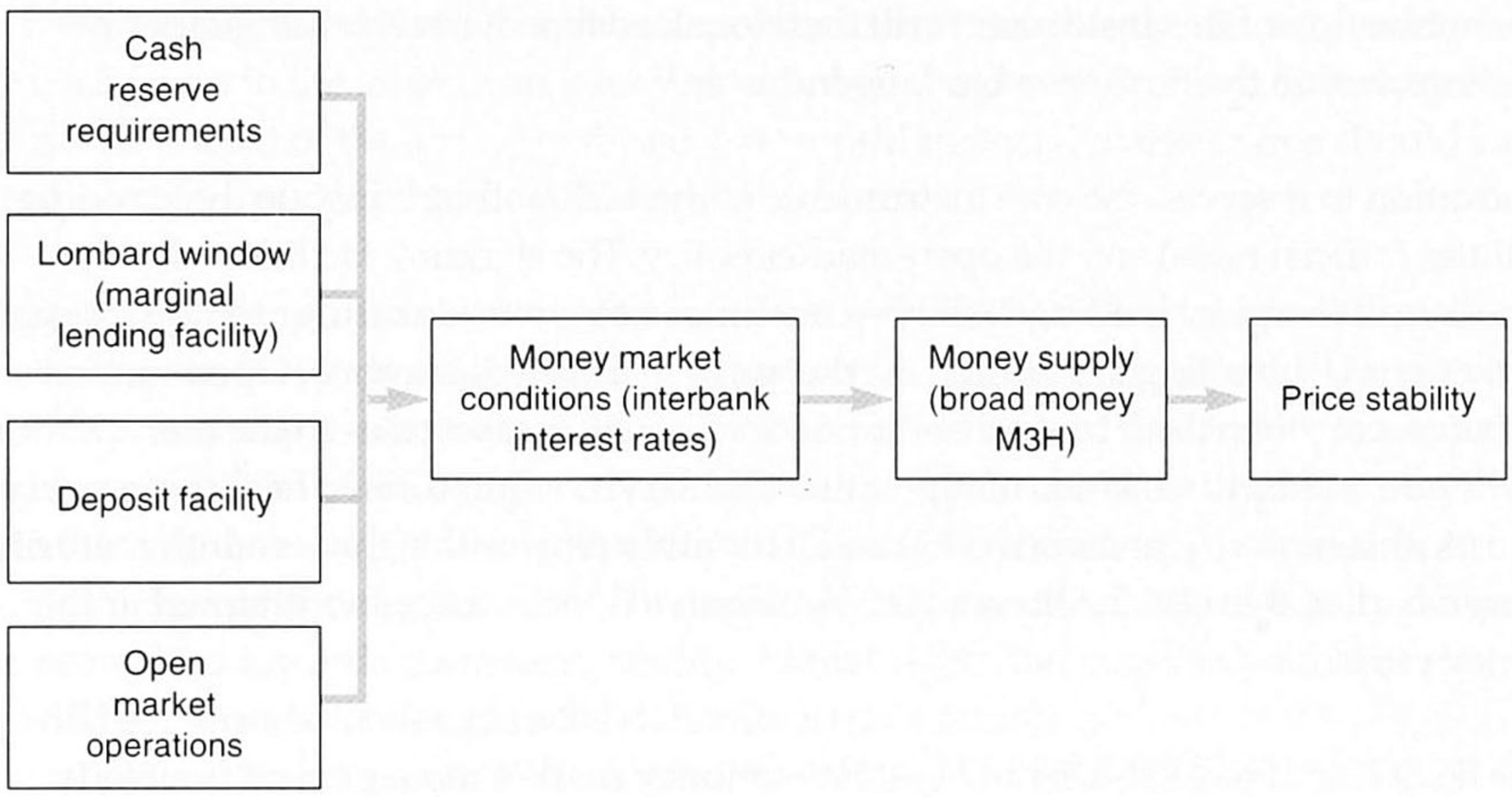
central banks pursue two objectives. Firstly, this instrument has to provide for a structural money market deficit to make the money market operations sufficiently effective. Secondly, the cash reserves have to act as an "automatic brake" on monetary expansion. In contrast to the Deutsche Bundesbank, the Banque de France also has tried to use the cash reserve ratios as an "active" instrument to control money growth in the short run. In this respect, during the 1980s and early 1990s, the French central bank experimented several times with a contrary policy mix of both the official rates and the cash reserve ratios. However, these experiments – i.e. higher (or lower) official rates combined with lower (or higher) cash reserve ratios – showed that there was no independence between both instruments. So we may conclude that the cash reserve requirements should only be used as a passive instrument in the medium to long run, i.e. as an "automatic brake" on monetary expansion. Looking at the smaller European economies, we see substantial differences between countries in how they conduct their monetary policies.

3.5. Monetary policy harmonisation

In the EMU the set of monetary policy instruments in use by the ESCB must be fully harmonised. What arsenal of monetary instruments will be required to achieve price stability in the EMU area? In the Maastricht Treaty and in the Statutes of the European Central Bank, European policy makers have explicitly opted for a set of indirect, market-oriented instruments. It is very likely that the future ECB will have the following monetary instruments at its disposal (EMI (1997), Moutot (1996)]:

1. Cash reserves requirements, the levels of which are set on a monthly basis. This instrument will include an averaging facility, giving the banks the opportunity to use their reserves at the central bank as working balances. This helps to smooth the banks' demand for central bank money, reducing the need for regular central bank interventions in the money market. At the time of writing, it is unclear whether the reserves will be remunerated or not;
2. a marginal lending or Lombard facility providing liquidity to the banks at rates usually above market rates, acting as a ceiling (upper limit) for money market rates;
3. a deposit facility for mopping up liquidity at rates below market rates, acting as a floor (lower limit) for money market rates;
4. an unsubsidised facilty for smaller banks, based on a monthly repo tender with a three- month maturity. This facility, which will supply the banks with their basic need for central bank money, will have more or less the same function as the discount facility in Germany. The rate on this facility will turn out to be the actual floor of three-month interbank money market rates;
5. fixed-term, fixed-frequency open market operations for steering and fine-tuning money market rates in the (very) short run. According to EU central banks these open-market operations, in particular reversed transactions, should play the dominant role in money market management. In addition, the use of outright transactions, foreign exchange repurchase agreements (repos) and swaps, and the issuance of central bank paper should not be excluded.

Figure 3 The transmission mechanism in EMU



There has been a lively debate between European central bankers, both within and outside the EMI Council, about the need for cash reserve requirements (ratios) as a monetary instrument. On the one hand, the Bank of England sees cash reserve ratios just as a "tax on the banking system". According to the British, this instrument would jeopardise the competitive strength of the European banks against the American and Japanese counterparts. Moreover, use of this instrument would stimulate further disintermediation of the banking system, eroding the basis for a policy of monetary targeting.

On the other hand, many European central banks – like the Bundesbank – consider the minimum reserve requirements as a necessary instrument of the outset of EMU. They would have to be maintained as an average of a specified period in order to smooth short-term interest rate fluctuations in the money market and to stabilise the demand for central bank money. In Germany, a system of cash reserve ratios acts, depending on the velocities (degree of liquidity) of bank deposits, as an "automatic brake" on monetary expansion. When targeting a broad monetary aggregate (M3H), the ECB may be confronted with large portfolio shifts within this aggregate, which could be offset by progressive cash reserve ratios. If, for example, there would be a shift from saving accounts to sight deposits, the aggregate could stay constant although its degree of liquidity and, as a result, its effect on spending would increase. As a result of the higher cash reserve ratio for sight deposits than for saving accounts, the banks will have less free (excess) reserves to create money and, as a consequence, monetary expansion will automatically be dampened. Of course, the instrument should be completely harmonized across countries and designed in such a way that it avoids disintermediation as much as possible.

Today, it looks almost certain that the arsenal of the ECB will include a cash reserve instrument, and the discussion focuses on the possibilities of remunerating the reserves at the central bank. In Germany, such reserves are not remunerated, as opposed to the Netherlands, where the central bank pays full market rates on the reserves. Harmonization of this instrument will therefore lead to a major shift in competitive positions within the European banking industry.[11]

In addition to reserves, the core instruments of the ECB will certainly be the standing facilities (official rates) and the open-market policy. The standing facilities – i.e. the deposit and marginal lending facility – constitute a theoretical corridor for the money market rates, signalling the desired market rates in the medium term. Open-market operations are then used to steer and fine-tune money market rates in the (very) short run. There will be three kinds of repo transactions, viz. a fine-tuning facility, a weekly repo (with a maturity of two-weeks) and a monthly repo with a three-month maturity. As said earlier, this last facility will be the effective floor of three-month interbank money rates.

This flexible and market-oriented system of money market management is already widely used and will gradually be introduced by all national central banks. In the EMU, monetary policy will be formulated centrally by the ECB in Frankfurt, but national central banks will remain responsible for the operational aspects. Banks, therefore, will still have to deal with local central banks. In order to prevent differences in interbank money market conditions within the EMU, the ECB will operate a Real Time Gross Settlement (RTGS) System, named TARGET.[12] This system will link the various national money markets to create an EMU-wide homogeneous money market. However, many technical issues remain under discussion, two of the most important being the access to TARGET and the issue of remote access. The discussion about TARGET focuses on the position of banks in countries not participating in the EMU and the conditions under which they can use the facilities of this system. While the UK claims that, under Internal Market regulations, its banks must have access to TARGET under the same conditions as banks in the EMU-area, most continental (central) banks feel that TARGET is designed to facilitate EMU monetary policy and that only banks, carrying the "burden" of the policy of the ECB must have access to it under the most favourable conditions.

The issue of remote access focuses (1) on the use of collateral deposited at central banks in other EMU countries, while drawing on facilities at the local central bank, (2) remote access to facilities of central banks in other EMU countries and (3) remote access to the payments system in other EMU countries.

These highly technical issues which, however, are of extreme importance in designing the EMU-wide level playing field in banking, are not expected to be fully settled in the near future[13].

4. The euro in world markets and G3 monetary policy coordination

If everything develops according to plan, the single European currency, the euro, will arrive on world financial markets early 1999. The euro will be a currency of substance right from the beginning. It will replace important currencies like the German mark and the French franc; in the longer run it may also replace the pound Sterling. To fully grasp the possible impact of the arrival of the euro on world financial markets, one should start by analysing the fundamentals of this currency.

Starting with a core group of converged economies, the EMU will, measured by its GDP, be the second largest industrial economy in the world, second only after the United States. [14] Its financial markets also will rank second after those in the United States, being more important than those in Japan. The EMU will be by far the most important trading bloc in the world, making the euro a potential important currency in the invoicing of international trade. Finally, the euro will be guarded by a central bank which, by design, has a strong bias towards monetary stability. At first sight, one may conclude that the euro will be a serious challenge to the dollar in world markets.

Table 1 The fundamentals of the euro

	EMU (core)	EMU (all)	Japan	United States
GDP (using PPPs; 1994) (1)	53	100	39	100
Outstanding public debt (1994) (1)	58	119	79	100
Gross savings ratio (%GDP) (1) (2)	21	19	31	17
Currency shares				
Currency invoicing of international trade (3)	18	25	6	59
Outstanding international debt securities (1995) (4)	20	29	18	35
Net issue of international debt securities (1995) (4)	25	31	35	24

(1) Based on OECD data, USA = 100.
(2) Weighed by relative GDP.
(3) Share in world trade after correction for intra EMU-trade. 1992. Source: Hartmann (1996).
(4) Based on IMF-data.

It must be realised that the current position of the US-dollar in world markets is based on a long tradition of being a vehicle currency for international foreign exchange transactions. With the exemption of the German mark in European markets, no other currency has reached such a vehicle currency status in world financial markets [Hartmann (1996)]. Irrespective of the fundamentals of the euro, it will take time before the euro has acquired a similar position.

It may be expected, however, that the euro will immediately play an important role in the invoicing of international trade. It is estimated, that the share of the euro in world trade invoicing will be around 25% [Hartmann (1996)]. In the longer run, the euro stands to

benefit from expected increases in trade flows between the EMU and Eastern Europe, and between the EMU and Asia. Of course, the importance of the euro in world trade invoicing will also be reflected in its position as a reserve currency. In the run-up to the EMU, however, the US dollar is not unlikely to gain in importance as a reserve currency. European central banks may be expected to change the composition of their currency reserves by buying US dollars and selling European currencies, in order to prevent the latter from being automatically exchanged into euro, which at the time will be a domestic currency for these countries. Only in the longer run will the euro gain in importance relative to the US dollar.

The market for domestic bonds in euro will be one of the largest in the world. Moreover, it is important to note that the euro will play an important role in international bond markets. Already today, we can see a gradual decline in the position of the US-dollar and an increase in the share of the currencies of core Europe in the issue of international bonds.

In the longer run, the position of the euro will be influenced by the extension of the EMU by countries that initially will have to derogate. Moreover, the fundamental strength of the currency will be decided upon by the reputation the ECB will be able to acquire in world markets. Although, at least on paper, the ECB will be the most independent central bank in the world, completely geared towards price stability, the proof of the pudding will be in the eating.

With the arrival of the euro, the world will be confronted with a tri-polar currency system, with the US dollar, the euro and the Japanese yen dominating world financial markets. During the 1980s and early 1990s, the world has experienced several attempts to coordinate monetary policy on a global scale in order to stabilise the exchange rate of the most important currencies. For instance, during times of dollar weakness, European authorities tried to establish some kind of international arrangement in order to prop up the American currency, the most notable example being the Louvre Agreement of early 1987. A weak dollar not only deteriorates the competitive position of the European export industry, but also leads to intra-European currency instability, as currencies like the French franc, the pound Sterling and the Italian lira tend to weaken more or less in line with the dollar against the German mark. On the other hand, in times of dollar strength the Americans usually tried to stabilise exchange markets, as was illustrated by the Plaza agreement of early 1985 and the several occasions in which the Americans put upward pressure on the Japanese yen in order to redress bilateral balance of payments disequilibria.

After 1999, however, the world economy will be different, as two of the three largest economic entities, viz. the EMU and the US, will by then be relatively closed and inwardly oriented economies. Moreover, dollar weakness will not have a different impact across EMU-countries, as a flight into the German mark will no longer be possible within Europe. European economic policy will be geared towards economic stability in its broadest sense, with the ECB aiming at domestic price stability and

deflationary budgetary policies aiming at meeting the budgetary criteria formulated in the Maastricht Treaty, which will remain in force after 1999 as well as a consequence of the so-called Stability and Growth Pact. In this pact, which was negotiated at the Dublin Summit of December 1996, rules have been laid down for budgetary policy in stage three of EMU. The underlying philosophy is that a government should more or less balance its budget over the business cycle, although during periods of weak economic growth a deficit up to 3% of GDP is allowed. If a public deficit is higher than 3% of GDP, a country will be fined, unless it is suffering from a severe recession.[15]

Moreover, in the United States there has been a considerable shift in the orientation of economic policy. Today more exclusively than before, the Federal Reserve is pursuing a policy that aims at price stability, although its policy of "looking at everything" would not earn an award for transparency. On the fiscal side, the expansionary budgetary policies of the early 1980s were replaced by a broad political consensus that the federal deficit must be eliminated in the medium and long run.

It is most probable that both the Federal Reserve in the United States and the ECB will focus almost exclusively on domestic price stability, while in both blocs fiscal policies will also aim at fiscal consolidation. This could result in a relatively stable dollar/euro exchange rate, also given the fact that bilateral trade between the US and EMU is not substantially out of balance. The arrival of EMU, therefore, not only eliminates intra-European currency instability; by removing exchange rate policy from the political agenda in many European countries, it also contributes to stability on world markets. The structural trend between the two currencies will stem from relative inflation performances which will, given the fact that price stability is more strongly institutionally imbedded in Europe than it is in the United States, in our view make the euro the stronger currency of the two in the long run. The yen will be the less stable of the three currencies as a result of, on the one hand, the huge Japanese surplus in bilateral trade with the other industrial blocs, which at times may put the currency under strong upward presure, and, on the other hand, the weakness of the Japanese financial system, which undermines the fundamental strength of the Japanese economy and therefore the stability of the yen.

6. About this volume

During the last decades, there have been remarkable changes in the behaviour of world financial markets. In many countries, the orientation of monetary policy also has changed considerably. Finally, the processes mentioned in this chapter have put financial systems under strain in many countries, leading to financial crises in the banking industry in Japan, France and Scandinavia, and in the Savings and Loans industry in the United States.

This book describes the developments in nine industrial countries, which combined will form the future world tri-polar currency system. The various chapters all have more or less the same structure. Firstly, after a short description of the economic background, the structure of the banking industry is decribed, including the most notable recent developments. Secondly, the book focusses on monetary policy, dealing respectively with the monetary strategy, the technical implementation of monetary policy and its results. Finally, a short forecast of future developments is made.

In spite of their more or less identical structure, the various chapters know remarkable differences in their approach to the subject. This variety reflects the different backgrounds in the countries under review: the various chapters are characterized by a substantial element of *couleur locale*. In Van Rixtel's chapter on Japan, for example, much attention is paid to the informal ties between the banking industry and the monetary authorities. Moreover, the precarious balance of power between the Ministry of Finance and the Bank of Japan receives much attention. On the other hand, De Jong's contribution on the United Kingdom strongly focuses on the impact of political conditions on the stance of monetary policy and on the struggle by the Bank of England to gain credibility in world markets. The contributions of Praet and Van Vuchelen on Belgium and Van den Berg on Italy highlight the difficulties a central bank will meet in pursuing a monetary policy aiming at price stability in an environment which is characterised by large fiscal imbalances. Van Campen and Van Dijk concentrate in their chapter on France on the difficult position of a large country, which in spite of being the fourth industrial economy in the world has the monetary characteristics of a small open economy. This forces the country to subject its monetary autonomy to the German Bundesbank in order to defend the French franc's ERM-parity. Custers and Van Gils describe the favourable effects of a successful policy of exchange rate targeting as pursued by the Netherlands, which should give hope to authorities in European countries that will not be able to join the EMU right from the start in 1999. The Dutch experiences show that it is certainly possible to succesfully link one currency to another, as long as domestic economic policies do not conflict with the exchange rate target. The chapter on Spain, by Hilbers and Voorrips, illustrates the way this country has developed in two decades time from a backward economy on the periphery of Europe into a serious candidate for the EMU, if not in 1999, then very probably before the year 2002. Boonstra's chapter on Germany strongly focusses on the technical implementation of monetary policy in this country, as German monetary policy today will best reflect the practice of the ECB after 1999. Moreover, it sheds some light on the German model of corporate governance and the factors leading to change in this area. Finally, Biemans' chapter on the United States clearly illustrates the change in orientation of the US monetary policies, marking the change from an unsuccessful attempt to target monetary growth in the early 1980s to a much more eclectic, succesful, though less transparent monetary policy today.

All in all, this volume shows the strong convergence that has occured in monetary policy orientations between the countries governed by the Anglo-Saxon model and those in continental Europe. A major difference remains, however. Whereas in Europe the high priority given to monetary stability resulted in a trend towards politically more

independent central banks, and once the EMU has started the ECB will be the world's most politically independent central bank, the Anglo-Saxon countries have not come to the same conclusion as yet. In these countries, the relative importance of monetary stability relative to other policy goals depend on persons and is not institutionalised. Time will tell whether this difference in approach will lead to different monetary policy orientations or that the Anglo-Saxon countries will ultimately follow the example of the ECB.

Oisterwijk / Lelystad

Notes

1 Examples of these product innovations are: Note Issuance Facilities (NIFs), Revolving Underwriting Facilities (RUFs), Forward Rate Agreements (FRAs), Floating Rate Notes (FRNs), Zero Coupon Bonds, interest rate swaps and options, and currency swaps and options.

2 For a thorough analysis of these processes, see e.g.: M. Goldstein, D. Mathieson and T. Lane (1991) and Federal Reserve Bank of Kansas City (1993)

3 For an analysis regarding the European Union, see Lemmen (1996) and Lemmen & Eijffinger (1996)

4 Goodhart (1984) states that "... any observed statistical regularity will tend to collapse, once pressure is placed upon it for control purposes ..." (p. 96).

5 The Treaty on European Union agreed in the Conference of the Representatives of the Governments of the Member States which was signed in Maastricht on 7 February 1992, including the Protocol on the Statute of the European System of Central Banks and of the European Central Bank.

6 See for an analysis of the transmission process of monetary policy with regard to France, Germany and the United Kingdom: S.C.W. Eijffinger (1993).

7 For a survey of the academic literature in this field, see Eijffinger & de Haan (1996)

8 For a detailed analysis of the developments in the major European economies, see the countributions in the other chapters of this volume. See also Eijffinger and van Keulen (1995).

9 Moreover, an increase in the short-term interest rate has a perverse effect on spending and income in Italy because the majority of government debt is in the hands of the public.

10 An extensive comparison of the monetary instruments in these countries is given in: S.C.W. Eijffinger (1993). See also the contributions of Boonstra (Germany), Van Campen & Van Dijk (France) and De Jong (United Kingdom) in this volume.

11 See Van Gils (1995) for an examination of the consequences of monetary policy harmonisation for the competitive position of Dutch banks against their German counterparts. See also and Boonstra & Mulders (1996).

12 TARGET is an acronym for *Trans-European Automated Gross Settlement Express Transfer System*. Target will link the various national RTGS-systems into an EMU-wide RTGS. Target is established to process monetary policy transactions. See EMI (1995).

13 For a full overview of the discussions so far, see EMI (1997).

14 Our analysis is based on EMU starting with Austria, Belgium, Finland, France, Germany, Ireland, Luxembourg and the Netherlands.

15 The details are as follows. If a country's public deficit exceeds the 3% ceiling and its real GDP has declined by 2% or more during the preceeding year, it will not be fined. If real GDP has declined by less than 2%, but more than 0.75%, there will be negotiations to see whether the country should be fined or not. With an economic decline of less than 0.75%, the country concerned will be automatically fined. At first, it should place an unremunerated deposit (with a maximum of 0.5% of GDP) at the ECB. If the deficit is not redressed within three years, the deposit will be changed into a fine.